LineUp With Math™ Alignment
Kansas Curricular Standards for Mathematics
Jan 31, 2004

Standard 1: Number and Computation

Number and Computation – The student uses numerical and computational concepts and procedures in a variety of situations.

Benchmark 3: Estimation – The student uses computational estimation with rational numbers and the irrational number pi in a variety of situations.

Seventh Grade Application Indicators The student…	***LineUp With Math*™ Activities**
2. estimates to check whether or not the result of a real-world problem using rational numbers, the irrational number pi, and/or simple algebraic expressions is reasonable and makes predictions based on the information) (2.4.A1a)	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
3. determines a reasonable range for the estimation of a quantity given a real-world problem and explains the reasonableness of the range (2.4.A1a)	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
4. determines if a real-world problem calls for an exact or approximate answer and performs the appropriate computation using various computational methods including mental math, paper and pencil, concrete objects, or appropriate technology (2.4.A1a)	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Standard 2: Algebra

Algebra – The student uses algebraic concepts and procedures in a variety of situations.

Benchmark 4: Models – The student generates and uses mathematical models to represent and justify mathematical relationships in a variety of situations.

Seventh Grade Application Indicators The student…	***LineUp With Math*™ Activities**
1. recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: a. process models (concrete objects, pictures, diagrams, number lines, hundred charts, measurement tools, multiplication arrays, division sets, or coordinate planes/grids) to model computational procedures and mathematical relationships and to solve equations; f. function tables to model numerical and algebraic	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts. --Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.

relationships; g. coordinate planes to model relationships between ordered pairs and linear equations; k. frequency tables, bar graphs, line graphs, circle graphs, Venn diagrams, charts, tables, single stem-and-leaf plots, scatter plots, and box-and-whisker plots to describe, interpret, and analyze data	
3. uses the mathematical modeling process to make inferences about real-world situations when the mathematical model used to represent the situation is given.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Standard 3: Geometry

Geometry – The student uses geometric concepts and procedures in a variety of situations.

Benchmark 2: Measurement and Estimation – The student estimates, measures, and uses measurement formulas in a variety of situations.

Seventh Grade Knowledge Base Indicators The student…	***LineUp With Math™* Activities**
1. determines and uses rational number approximations (estimations) for length, width, weight, volume, temperature, time, perimeter, and area using standard and nonstandard units of measure (2.4.K1a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
2. selects and uses measurement tools, units of measure, and level of precision appropriate for a given situation to find accurate rational number representations for length, weight, volume, temperature, time, perimeter, area and angle measurements. (2.4.K1a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
8. uses appropriate units to describe rate as a unit of measure(2.4.K1a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
Seventh Grade Application Indicators The student…	***LineUp With Math™* Activities**
1. solves real-world problems by: d. using appropriate units to describe rate as a unit of measure (2.4.A1a) f. applying various measurement techniques (selecting and using measurement tools, units of measure, and level of precision) to find accurate rational number representations for length, weight, volume, temperature, time, perimeter, and area appropriate to a given situation (2.4.A1a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

2. estimates to check whether or not measurements or calculations for length, width, weight, volume, temperature, time, perimeter, and area in real-world problems are reasonable and adjusts original measurement or estimation based on additional information (a frame of reference) (2.4.A1a)	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations. --Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.